375 Field Communicator

- *Universal – HART® and FOUNDATION™ fieldbus*
- *User upgradeable*
- *Intrinsically safe*
- *Rugged and reliable*
- *Interfaces with AMS® Suite: Intelligent Device Manager*
- *Graphical interface*

The 375 Field Communicator is designed to support all HART and FOUNDATION fieldbus devices from all vendors.

Introduction

The 375 Field Communicator has established itself as the standard in handheld communicators. HART users worldwide told us how to make a better communicator. Fieldbus users said they wanted a portable, intrinsically safe communicator that supported all their fieldbus devices.

The result is the universal, user upgradeable, intrinsically safe, rugged and reliable 375 Field Communicator.

More Application, Information, and Pricing available at:

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Click to go www.TestWorld.com

Designed not only for use on the bench, the 375 Field Communicator also enables you to do those tasks that just have to be done in the field.

Product Description

The 375 Field Communicator includes features designed to simplify your work in the field. Use a single intuitive user interface for both HART and FOUNDATION fieldbus devices. The 375 Field Communicator includes a larger touch screen than PDAs or Pocket PCs, HART Revision 6 and 7 (including WirelessHART™) support, and the ability to upgrade onsite using the Internet.

See the Difference

The 375 Field Communicator runs on Windows CE, a robust, real-time operating system.

The touch-screen display uses transflective technology, making it easy to read in both bright sunlight and in normal lighting. To make sure all conditions are covered, a multi-level backlight is included, allowing the display to be viewed even in areas of your plant with dim light.

The touch-screen display and large physical navigation buttons allow efficient use both on the bench and in the field.

The Graphics Option for the 375 Field Communicator uses powerful EDDL technology that allows you to read data from field devices in a graphical manner. Charts, graphs, gauges, and product images are just a few of the ways that important device data can be displayed using the Graphics Option.

The weight of the 375 Field Communicator is evenly distributed for comfortable one-handed operation.

It Is Loaded!

The 375 Field Communicator has plenty of memory to allow for future expansion. It has 32 MB of application memory, and 1 GB of memory on its System Card. The Configuration Expansion Module holds hundreds of device configurations, and it is externally accessible. The battery pack allows a full recharge in 2 hours.

***Easy Upgrade* Keeps Your Communicator Current**

The 375 Field Communicator is also user upgradeable via the Internet. It is no longer necessary to send away to have new device drivers, functionality, or licenses added to your 375 Field Communicator.

New HART and FOUNDATION fieldbus devices, as well as functional updates to existing devices, are introduced continually by device vendors. Keeping up-to-date with the required Device Descriptions (DDs) for all the devices in your plant can be a real challenge.

As new HART and FOUNDATION fieldbus DDs become available, simply download them from the Internet and upgrade your 375 Field Communicator.

The 375 Field Communicator, with its handy carrying case, provides a single tool for configuring and diagnosing HART and FOUNDATION fieldbus devices.

Universal – HART and FOUNDATION fieldbus

The 375 Field Communicator is designed to support all HART and FOUNDATION fieldbus devices. With access to new device drivers over the Internet, you are guaranteed universal HART and FOUNDATION fieldbus support in a single, intrinsically safe handheld communicator.

With over 1,200 different HART and FOUNDATION fieldbus devices from more than 100 different vendors, the 375 Field Communicator is a single communicator that works with all your devices to positively impact your bottom line.

Diagnose Network Problems

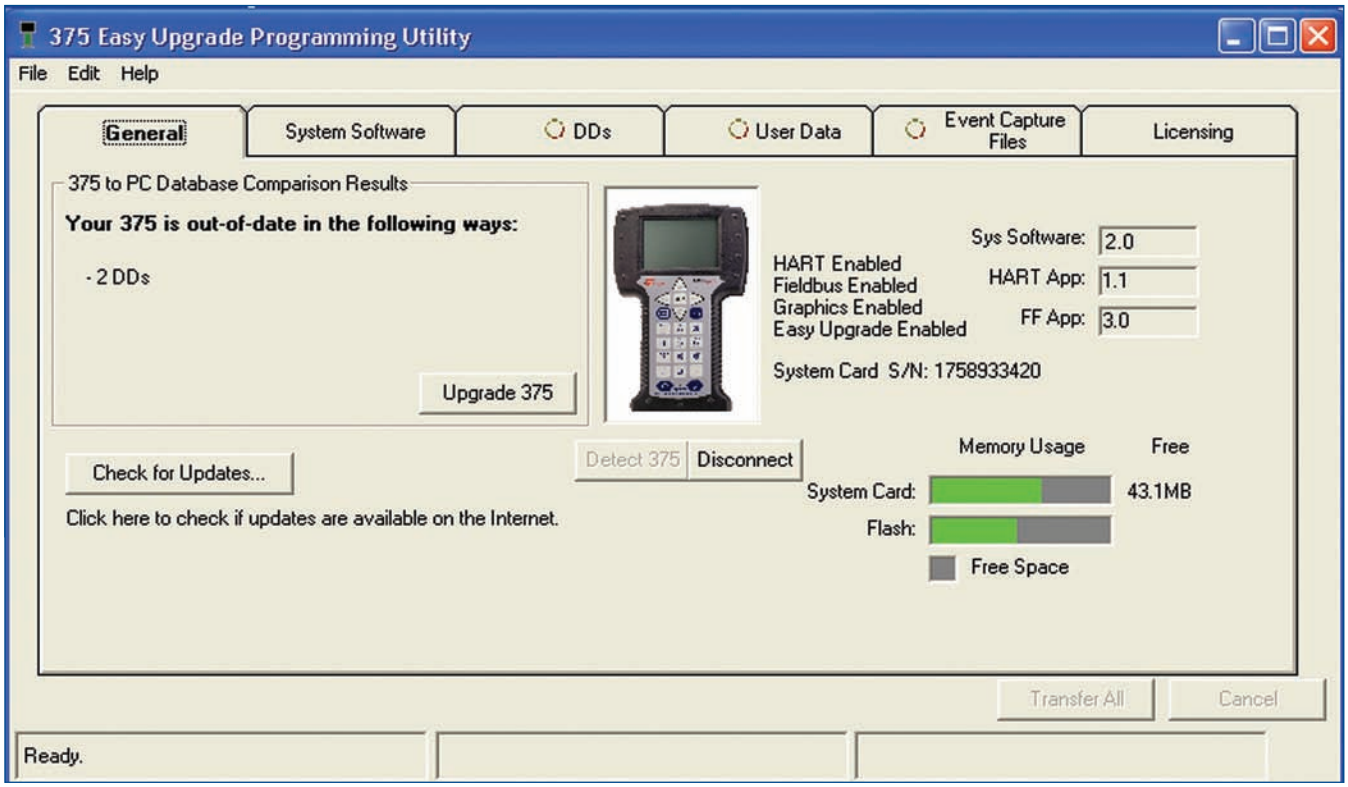
The 375 Field Communicator can be used to configure all the FOUNDATION fieldbus devices in your plant. Use it to perform diagnostics for effective start-up and troubleshooting of FOUNDATION fieldbus segments. Create a quality segment by diagnosing the network DC voltage and average noise.

Detect power supply problems by monitoring low frequency noise on a segment. Locate incorrect terminations and faulty devices by diagnosing the communications signal level.

For HART loops, the 375 Field Communicator allows you to verify whether the DC voltage in the loop is correct.

HART COMMUNICATION PROTOCOL

Fieldbus Foundation



Easy Upgrade allows you to transfer system software and DDs between the 375 Field Communicator and a PC using either IrDA or an SD Card Reader. Transfer configuration data between the 375 and AMS Device Manager or update Device Descriptions and functionality.

User Upgradeable

As functional enhancements to HART and FOUNDATION fieldbus applications become available, download the updates from the Internet and upgrade your 375 Field Communicator. It is no longer necessary to send your communicator to a service center to have new DDs or software updates added. *Easy Upgrade* lets you update your own 375 Field Communicator and avoid waiting for your upgrades. Update at your site, within your control, when it's convenient for you.

Online Licensing

The Online Licensing capability provided with *Easy Upgrade* allows you to enable new options for your 375 Field Communicator over the Internet. By using this feature, you can add powerful new options such as FOUNDATION fieldbus and Graphics by merely purchasing and downloading them to your 375 Field Communicator.

Intrinsically Safe

The 375 Field Communicator meets the Intrinsic Safety requirements of the listed regulatory agencies and standards. All of the available Hazardous Locations approvals are provided in a single model option (see Ordering Information).

- CENELEC/ATEX
- Factory Mutual (FM)
- Canadian Standards Association (CSA)
- FISCO
- IECEX

ATEX

Even the battery is approved for installation in hazardous areas. The 375 Field Communicator is designed for use in areas where laptops cannot go.

Rugged and Reliable

It's called "Field Communicator" for a reason. Some tasks just have to be performed at the device. The 375 Field Communicator is designed for tough use in your plant or mill.

Its large keys and physical navigation buttons allow for one-handed operation, even with your work gloves on. The rugged display is designed to take the knocks and shocks from normal use in the plant.

The 375 Field Communicator is designed, manufactured, and tested to very demanding specifications. The 375 Field Communicator goes wherever you have to go to get the job done.

Specifications

PROCESSOR AND MEMORY Specifications

Microprocessor
- 80 MHz Hitachi® SH3

Memory Internal Flash
- 32 MB

System Card
- 1 GB secure digital card

RAM
- 32 MB

Expansion Module
- 32 MB or higher secure digital card

PHYSICAL Specifications

Weight
- Approximately 2 lb. (0.9kg) with battery

Display
- 1/4 VGA (240 by 320 pixels) monochrome 3.8" (9.6 cm) transflective display with touch screen
- Anti-glare coated

Keypad
- 25 keys including 4 action keys, 12 alphanumeric keys, 4 programmable function keys, on/off/standby, and 4 cursor-control (arrow) keys; membrane design with tactile feedback

POWER SUPPLY Specifications

Battery Pack (NiMH)
- Rechargeable NiMH cells
- Up to 10 hours operating time (depending on usage)
- Up to 40 hours standby time

Power Module (Lithium-Ion) *optional*
- Rechargeable Li-Ion cells
- Up to 20 hours operating time (depending on usage)
- Up to 80 hours standby time

Power Supply/Charger Options
- Input voltage 100-240 VAC, 50/60 Hz
- Cables included with U.S., European, U.K., and Australia plugs

CONNECTION Specifications

Battery Charger
- Mini DIN 6-pin jack for Li-Ion Power Module
- Mini DIN 6-pin to 4-pin adapter cable for NiMH Battery Pack

HART and Fieldbus
- Three 4mm banana plugs (one common to HART and FOUNDATION fieldbus)

IrDA Port
- IrDA (Infrared Data Access) port supporting up to 115 Kbps
- ±15 degrees recommended maximum angle from center line
- Approximately 12" (30 cm) recommended maximum distance

ENVIRONMENTAL Specifications

Usage
- -10° C (14° F) to +50° C (122° F)
- 0% to 95% RH (non-condensing) for 0° C (32° F) to +50° C (122° F)

Charge
- 10° C (50° F) to +40° C (104° F)

Storage With Batteries
- -20° C (-4° F) to +55° C (131° F)

Storage Without Batteries
- -20° C (-4° F) to +60° C (140° F)

Enclosure Rating
- IP51 (from front)

Shock
- Tested to survive a 1-meter drop test onto concrete

EASY UPGRADE REQUIREMENTS

Usage
- PC with Internet access
- CD Rom drive
- IrDA port (or adapter)
- Windows XP, SP 2

Interfaces with AMS Device Manager

The 375 Field Communicator is fully compatible with AMS Device Manager, the industry standard for asset management software. In fact, Control Magazine readers have selected AMS Device Manager as the #1 Calibration Software package for over 10 years in a row.

AMS Device Manager uses the intelligence from field devices to create a predictive maintenance environment. AMS Device Manager allows you to configure, calibrate, document, and troubleshoot HART, FOUNDATION fieldbus, and WirelessHART devices.

Transfer device configuration data to AMS Device Manager via the IrDA port on the 375 Field Communicator and your PC. Carry your 375 Field Communicator out to the field to configure or update one or many devices. Save device configurations in your 375 Field Communicator or transfer them to AMS Device Manager. The optional Configuration Expansion Module easily stores 500 or more device configurations safely in your 375 Field Communicator.

Together, the 375 Field Communicator and AMS Device Manager enable you to efficiently manage all of your devices, the assets that are the foundation of your process.

The Configuration Expansion Module safely stores hundreds of device configurations.

375 Field Communicator Spare Parts List

Description	Part Number
Ruggedized 250 Ohm Load Resistor	00275-0096-0001
Rechargeable NiMH Battery Pack with Accessory Case	00375-0002-0011
Rechargeable Li-Ion Power Module with Accessory Case (7)	00375-0002-0022
Rechargeable Li-Ion Power Module with Power Supply/Charger	00375-0002-0044
Power Supply/Charger for NiMH/Li-Ion (100-240 VAC, 50/60Hz, US/UK/EU connection types included)	00375-0003-0022
NiMH Battery Pack Adapter Cable (8)	00375-0003-0008
Leadset with connectors	00375-0004-0001
Mounting Straps	00375-0005-0002
Carrying Case (with straps)	00375-0005-0003
Accessory Case (clips to Carrying Case)	00375-0005-0004
Stylus (pack of 5)	00375-0006-0001
IrDA to USB Adapter (1)	00375-0015-0002
System Card (SD) Reader (with USB Interface) (2)	00375-0018-0022
Expansion Port Plug	00375-0035-0001
System Card - HART with *Easy Upgrade* (3 years) (3)	00375-0042-0003
System Card - HART and FOUNDATION fieldbus with *Easy Upgrade* (3 years) (3)	00375-0042-0004
System Card - HART with *Easy Upgrade* (3 years) and Graphics (3)	00375-0042-0013
System Card - HART and FOUNDATION fieldbus with *Easy Upgrade* (3 years) and Graphics (3)	00375-0042-0014
Configuration Expansion Module	00375-0043-0001
Stand and Utility Plate	00375-0044-0001
Getting Started Guide	00375-0045-0001
User's Manual	00375-0047-0001
Resource CD (4)	00375-0049-0001
375 Online Licensing	
FOUNDATION fieldbus License Via Web (4)	00375-0142-0002
Easy Upgrade (New) License Via Web (4)	00375-0142-0003
Easy Upgrade (Renew) License Via Web (4) (5)	00375-0142-2003
Graphics License Via Web (4)	00375-0142-0010
AMS Device Manager Handheld Interface Kit	
AMS Device Manager Handheld Communicator Interface Kit (25 tags) (6)	AW7005HC00025
AMS Device Manager Handheld Communicator Interface Kit (100 tags and above) (6)	AW7005HC20000

(1) Can be used to support communication between the 375 Field Communicator and the Easy Upgrade Programming Utility or AMS Suite: Intelligent Device Manager (with Handheld Communicator Interface Kit). IrDA is required to register the 375 or use the Online Licensing system.

(2) Compared to using IrDA, the System Card (SD) Reader provides a much faster alternative to upgrading a System Card. The ability to use a card reader exists with *Easy Upgrade* Programming Utility 1.6.0 (or higher). Due to file size constraints, some upgrades require the use of a card reader.

(3) These system cards should only be used on communicators with serial numbers greater than 24.000. Using these cards in older units will cause unpredictable behavior.

(4) This part is for a field upgrade of System Cards via the Online Lincensing system by the end user. An agent may also perform this on the user's behalf. It is at the agent's discretion if an additional fee should apply. Any order must be accompanied by the System Card Serial Number which can be obtained by interfacing the 375 Field Communicator with v 1.6.0 (or higher) of the Easy Upgrade Programming Utility. Notification that the licenses are available for download can be sent to an email address provided at time of order.

(5) The Renew option is available for System Cards where the *Easy Upgrade* license has not been expired for more than 90 days. Date of expiration can be obtained by interfacing the 375 Field Communicator with v 1.6.0 (or higher) of the Easy Upgrade Programming Utility.

(6) Requires AMS Device Manager (V 6.2 or higher). Both AMS Device Manager and the Handheld Communicator Interface Kit are available for sale through select channels only. See www.ams.assetweb.com for further details.

(7) Requires Power Supply/Charger 00375-0003-0022. Will not work with older charger 00375-0003-0011.

(8) Required to use Power Supply/Charger with NiMH Battery Pack. Included with 00375-0003-0022 Power Supply/Charger.

375 Field Communicator Ordering Information

Model	Product Description
375	Field Communicator (1)
Code	**Communication Protocol**
H	HART
F	HART and FOUNDATION fieldbus (2)
Code	**Battery Type**
R	Rechargeable NiMH Battery Pack
P	Rechargeable Lithium-Ion Power Module
Code	**Power Supply/Charger**
1	Power Supply/Recharger NiMH/Li-Ion (100/240 VAC, 50/60Hz, US/UK/EU connection types included) (3)
9	Not included (4)
Code	**Language**
E	English
Code	**Product Certifications**
KL	CENELEC/ATEX, FM, CSA, and IECEx Intrinsically Safe (includes FISCO as applicable)
NA	No Approval
Code	**Easy Upgrade**
U	*Easy Upgrade* (3 year) Option (5)
9	Not Included
Code	**Options**
A	Power Module (6) (10)
B	Spare Rechargeable NiMH Battery Pack (6) (9)
C	Configuration Expansion Module (7)
G	Graphics Option (2) (8)

Typical HART Model Number: 375 H P 1 E KL U
Typical HART/Fieldbus Model Number: 375 F P 1 E KL U

(1) Base Model 375 includes Field Communicator Unit, System Card, Leadset with Connectors, Carrying Case, Getting Started Guide, User's Manual, 375 Resource CD, Stylus and Straps.

(2) Must specify *Easy Upgrade* Option (Code U) when ordering this model option.

(3) To obtain Australian Power cord, order part numbers 00375-0003-0003.

(4) This option should be considered only if the user already has a 375 Power Supply/Charger that supports the battery type they are ordering.

(5) The *Easy Upgrade* capability allows the user to add new System Application software and Device Descriptions (DDs) to the 375 for a period of 3 years. To upgrade without this feature, the System Card would have to be sent to a Service Center.

(6) A fully charged NiMH battery pack is capable of delivering power for 8 hours of typical field use, whereas a Li-Ion Power Module is capable of delivering 20 hours. If requirements exceed this specification, a second battery pack is (Code B or A) recommended.

(7) The 375 is capable of storing a total of 25 configurations. For increased storage capacity, use the Configuration Expansion Module which is capable of storing in excess of 500 configurations.

(8) The Graphics Option enables a user to access Enhanced Graphical features when using the HART or FOUNDATION fieldbus applications (as applicable).

(9) Available with NiMH Battery Type R only.

(10) Available with Li-Ion Battery Type P only.

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